A marked-up version of the rewritten sections and claims is attached hereto.

2. Claims 1-28 have been amended to overcome the antecedent basis rejections, misdescriptiveness rejections, indefinite rejections, and clarify the claims. Claims 1-4 and 6-28 have been amended to overcome the rejections related to reciting "characterized in that". Claims 4, 7, 8, 9, 11-13, 15, 16, 18, 20, and 24 have been amended to overcome the rejections related to reciting a genus and species thereof in the same claim. Claims 1-28 should be allowed. The changes to claims 1-28 are made for clarification and do not further limit or narrow the scope of the claims. No new matter has been added.

3. In the Office Action, claims 1-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,863,017 to Yueh. Yueh does not teach or suggest a fish based food product in which the paste material is aerated by texturization and the fibrous material is obtained by extrusion cooking, as recited in claim 1. Instead, Yueh discloses a method for preparing a fabricated sea food product by mixing a fish paste and individual fish fibers. The fish fibers are obtained by heating fish flesh to a temperature of from 160 to 210 F. The sea food product disclosed in Yueh is obtained by mixing the paste and the fibers, and then shaping the mixture by molding or extruding, heating by steaming, and then cooling.

Yueh does not disclose the paste material being aerated by texturization. Instead, Yueh teaches against a product with an aerated paste material. Yueh discloses that the mixing of the fibers and the paste is carried out under vacuum, thereby preventing voids or bubbles in the mixture. (See col. 3, lines 33-35). In the present invention, as recited in claim 1, the

aerating of the paste material makes it possible to produce a new paste mixture that is soft, light, elastic and tender. (See at least p. 21, lines 26-29 of the present invention). This is a new, useful function not disclosed by Yueh.

Therefore, claim 1 is not unpatentable under 35 U.S.C. § 103(a), and should be allowed. Claim 2 discloses paste material being aerated by texturization and fibrous material obtained by size reduction of a fish based preparation. This is not disclosed or suggested by Yueh. Thus, claim 2 is allowable. Claims 3-5 depend from claim 1 and should be allowable for at least the dependencies.

Claim 6 depends from claim 1 and should be allowable in view of at least the dependency. Furthermore, claims 6-28 are directed to a process for production of a fish based food product recited in claim 1. Yueh does not teach or suggest a process for the manufacture of products in which the fibrous material is obtained by extrusion cooking and in which the paste material is aerated by texturization. Therefore, claim 6 should be allowed, and depending claims 7-28 should be allowed for at least the dependencies.

Yueh does not teach or suggest that paste material is textured by the addition of air, as recited in claim 7 of the present application. Instead, Yueh actually teaches against aerating the paste material. Yueh discloses that the mixing of the fibers and the paste is carried out under vacuum, thereby preventing voids or bubbles in the mixture. (See col. 3, lines 33-35). Therefore, claim 7 should be allowed. Depending claims 16-28 should be allowed at least for the dependencies.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

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7/22/02
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date indicated below as first class mail in an envelope addressed to the Commissioner of Patents, Washington, D.C. 20231.

Date: 7/22/02

Signature: Carolina Rodriguez
Person Making Deposit

Application No.: 09/594,922

## Marked Up Specification Paragraphs

Please substitute the following paragraph on p. 5, lines 29-30.

"The level of incorporation of fibrous materials in the paste material is between 5 and 60% in weight, depending on the desired final texture, usually between 10 and 60% or 5 and 30%."

## Marked Up Claim(s)

1. (Amended) Fish based food product comprising two materials, a paste material and a fibrous material, the paste material being aerated by texturization, the fibrous material incorporating individual fibres or bundles of fibres with a diameter in [the] a range of 1 µm to 1 mm, the product presenting a heterogeneous texture and a firm and elastic overall consistency similar to that of fish or crustacean muscle tissue, [characterised in that] wherein the extruded fibrous material, which is obtained by extrusion cooking, forms a network of macroscopic fibres whose diameters are ~~in~~ [the] an order of 0.1 mm to 1 mm, and forms a ramified structure with [into] microscopic fibres with diameters ~~in~~ [the] an order of 1 µm to 0.1 mm.

2. (Amended) Fish based food product comprising two materials, a paste material and a fibrous material, the paste material being aerated by texturization, the fibrous material incorporating individual fibres or bundles of fibres with a

diameter in [the] a range of 1 µm to 1 mm, the product presenting a heterogeneous texture and a firm and elastic overall consistency similar to that of fish or crustacean muscle tissue, [characterised in that] wherein the fibrous material consists of small fibres with a diameter of 0.1 mm to 1 mm, the small fibres being obtained by size reduction of a fish based preparation, or originating from natural fibres of marine products resulting from mechanical separation of myotomes.

3. (Amended) Product according to claim 1 [characterised in that] wherein [it] the product contains over 30% of fish meat[, in particular between 30 and 60%,] and 25 to 40% water, in two- or three-dimensional shapes [such as thin strips, cylinders, fish pâtés or other shapes, to which colouring is added in some cases].

4. (Amended) Product according to claim 3 [characterised in that] wherein the shapes are [typically] 1 to 12 cm in length and weigh between 3 and 300 g[, typically 3 to 20 g].

5. (Amended) Fish based food product [incorporating a product] according to claim 1, the paste material consisting of over 30% of fish meat, wherein the product is [preparation being] in the form of fish steaks, fish and vegetable based cakes, filled bars, quiches, pies, thin slices, spreads, fish rillettes, fish pâté, or small ludic shapes.

6. (Amended) Process for the production of a product with a heterogeneous texture according to claim 1 [characterised in

that] wherein [it] the process is comprised of the following steps:

- manufacturing a [manufacture of] fibrous material and paste material;

- mixing the fibrous material with the paste material;

- moulding the mixture to form shapes.

7. (Amended) Process according to claim 6 [characterised in that] wherein paste material is textured, usually by addition of air, using homogenisation, emulsification, and/or expansion and/or cutting[ type processes] before mixing with the fibrous material, at a rate of 0.5 part to 1 part air per 1 part of paste material, in order to obtain a gelling strength in [the] an order of 50 to 150 g/ $cm^2$, or after mixing with the fibrous material by adding between 0.3 and 1 part air per mixture part.

8. (Amended) Process according to claim 6 [characterised in that] wherein the fibrous material consists of a ramified network of fibres obtained from minced fish meat by means of a high-temperature and high-moisture extrusion cooking process comprised of the following steps:

a. introducing [introduction of] fish meat into a single screw extruder;

b. transferring [transfer of] fish meat from one end to [the] ~~an other~~ end of [the] an extruder barrel, adjusting screw configuration and temperature within the barrel such that

raw [materials] material of the fish meat successively [undergo] undergoes a mixing and heating step up to a temperature of about 130°C, followed by a melting step with an increase in temperature of the material to above 130°C, [generally between 140°C and 200°C,] and an increase in pressure to between 0 and 50 bars, such that plasticization of the transferred material takes place;

c. extruding [extrusion] at the [far] other end of the barrel [of] the transferred material obtained after plasticization through a die adapted for texturization, shaping and cooling the transferred material such that a product with a ramified fibrous structure is obtained.

9. (Amended) Process according to claim 8 [characterised in that] wherein the extruded fibrous material is cooled in the die to a temperature of 100°C, [possibly even between 80°C and 30°C,] and the process comprises an initial cooling phase in an uncooled zone in the die at the [outlet] other end of the barrel, followed by a second cooling phase in a cooled zone at an outlet of the die.

10. (Amended) Process according to claim 8 [characterised in that] wherein the extruded fibrous material obtained [at] from the die outlet is cooled in a cold shower, sliced to [the] a desired length, then ground, with bundles of extruded fibres being cut and processed [separated] by at least one of shredding, mincing, lamination, blending, homogenisation [and] or separation such that [they] the extruded fibrous material can be dispersed in a fish based matrix.

11. (Amended) Process according to claim 8 [characterised in that] wherein the extruded [mixture] fibrous material contains 15 to 50% of dry matter, [notably 25 to 40%,] the dry matter consisting of at least 35% of total proteins.

12. (Amended) Process according to claim 11 [characterised in that] wherein 25 to 100% of dry matter in the extruded [mixture] fibrous material consists of ~~the~~ dry matter originating from fish and/or other marine products, and the dry matter comprises [essentially comprised of] marine proteins in the form of minces, fillets, pulps, or surimi extracts[, etc. and, in some cases, other marine extracts such as fish oil, fish bone powder, crustacean shell powder, chitosane, fish collagen].

13. (Amended) Process according to claim 12 [characterised in that] wherein, [in addition to dry matter originating from fish,] the dry matter in the extruded [mixture] fibrous material contains functional milk proteins, [such as whey proteins, caseins and/or caseinates,] the functional milk proteins being in a dried or concentrated form.

14. (Amended) Process according to claim 12 [characterised in that] wherein the extruded [mixture] fibrous material also contains at least one of egg proteins in liquid or powder form, vegetable or dairy fats, concentrated or isolated vegetable proteins, vegetable flour, starches and other complex carbohydrates, food grade hydrocolloids, spices, flavouring [and] or colouring.

15. (Amended) Process according to claim 8 [characterised in that] wherein the extruded [fibres are] fibrous material is used in fresh form or preserved by physical treatment[ such as freezing, pasteurisation or sterilisation].

16. (Amended) Process according to claim 7 [characterised in that] wherein the fibrous material consists of small fibres obtained from a fish based preparation, the small fibres being manufactured according to the following steps:

- mixing [the] ingredients of the fish based preparation;
- forming the fish based preparation;
- moulding and cooking the fish based preparation to allow gelling to take place;
- cooling;
- size reduction of the cooked fish based preparation[ such as cutting or grating].

17. (Amended) Process according to claim 16 [characterised in that] wherein the fish based preparation used in the manufacture of the small fibres consists of over 50% washed and refined fish meat suitable for gelling, to which cryoprotectant type stabilising agents are added for freezing purposes, [and] the fish based preparation having a moisture content below 80%[, the fish based preparation possibly enriched with gelling or thickening agents so as to obtain] and having a gel strength of 150 to 300 $g/cm^2$.

18. (Amended) Process according to claim 7 [characterised in that] wherein the fibrous material contains cooked or raw natural fibres from crab or other marine products, obtained by mechanical separation treatment[, usually using a mixer with a rotary cylinder and comb].

19. (Amended) Process according to claim 7 [characterised in that] wherein the paste material[: -] contains over 30% washed and refined fish meat suitable for gelling, to which cryoprotectant type stabilising agents are added for freezing purposes, and has a moisture content below 80%,[;] and the process includes [- and in some cases enriched] enriching the paste material with gelling or thickening agents so as to obtain a gel strength of 100 to 250 g/cm prior to texturization.

20. (Amended) Process according to claim 7 [characterised in that] wherein [the] a level of incorporation of the fibrous [materials] material in the paste material is between 5 and 60% in weight, depending on the desired final texture[, usually between 5 and 30%].

21. (Amended) Process according to claim 7 [characterised in that] wherein mixing takes place at a temperature in [the] a range of $-10^{0}C$ and $+20^{0}C$.

22. (Amended) Process according to claim 7 [characterised in that] wherein the fibrous material mixed with the paste material consists of at least one type of fibre chosen from [the group

comprised of] ramified network fibres, fine fibres and natural fibres.

23. (Amended) Process according to claim 7 [characterised in that] wherein the fibres can be [the] ~~a~~ same colour as the paste material or a different colour.

24. (Amended) Process according to claim 7 [characterised in that] wherein the fibrous material is [fibres are] incorporated according to a statistical method, in a blender or mixing tank, or according to a dynamic method[, ~~notably~~ in an on-line mixer].

25. (Amended) Process according to claim 7 [characterised in that] wherein melting of the textured paste material is regulated as a function of [the] ~~a~~ level of fats in the paste material, the paste material having a fat level between 0 and 50%.

26. (Amended) Process according to claim 7 [characterised in that] wherein the paste obtained by mixing the [fibres] fibrous material and paste material undergoes the following steps:

- forming by extrusion or moulding into two- or three-dimensional shapes or into a strip;
- cooking, leading to gelling and stabilisation of the product;
- cooling.

27. (Amended) Process according to claim 26 [characterised in that] wherein surface colour may or may not be added to the extruded or molded forms [obtained], [either] the colour is added to raw forms, and/or after the cooking step, by spraying, depositing colour on the strip or extrusion of a coloured paste material.

28. (Amended) Process according to claim 26 [characterised in that] wherein the cooking step consists of a combination of a microwave cooking step and a steam cooking step, the microwave cooking [essentially] providing rapid cooking to the core of the product so as to produce a sufficiently stable gel-like structure that is stable before cooling while the steam cooking leads to the surface of the product being cooked without drying it out, with the microwave cooking being carried out before or simultaneously [to] with the steam cooking.